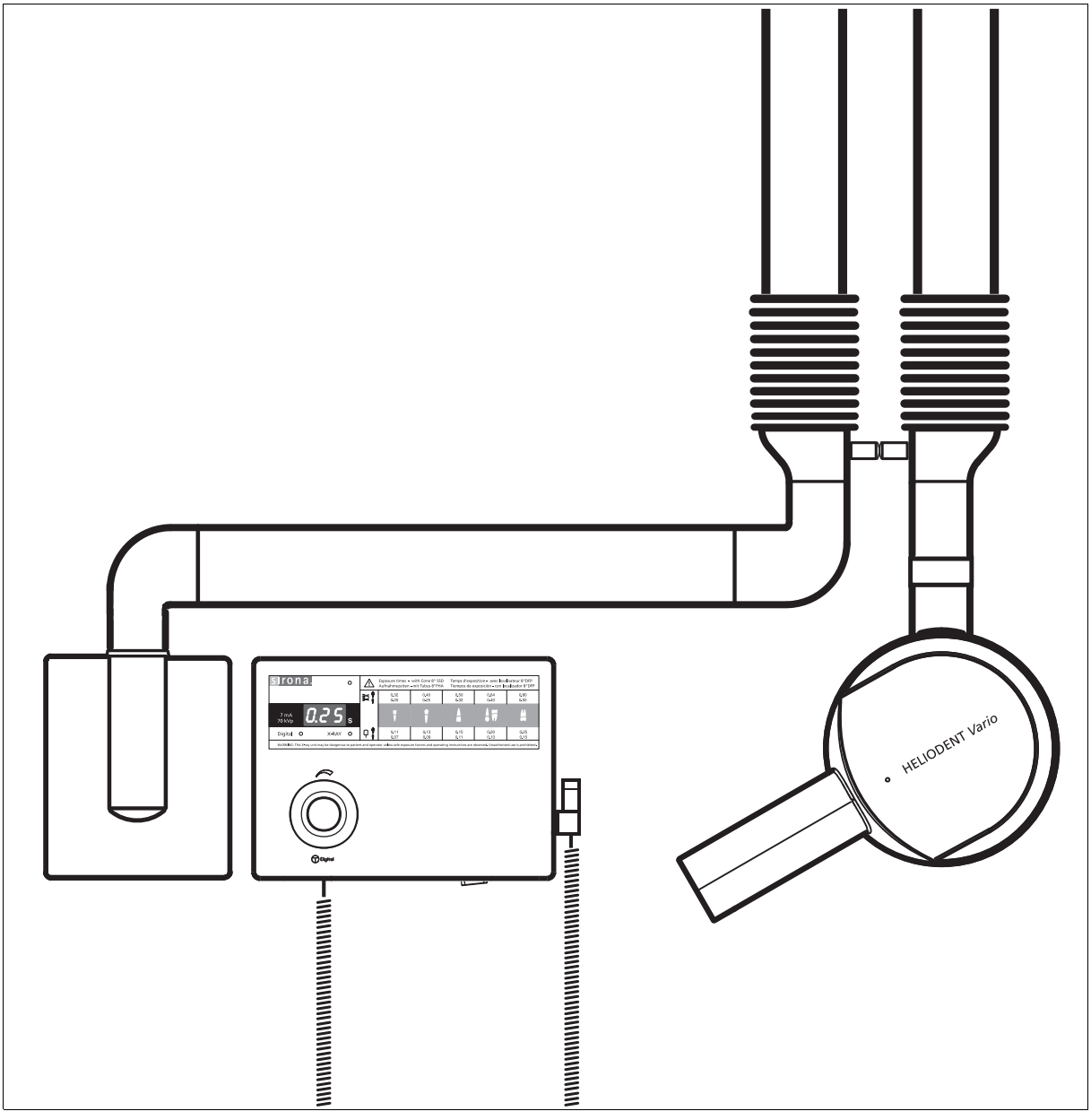
sirona
The Dental Company

HELIODENT *Vario*

Inspection and maintenance



Dear customer

You would like to have and will have many years of satisfaction with your **Sirona** X-ray unit.

Safety and reliability are necessary to ensure this.

Your dental dealership offers you service by specially trained engineers for this purpose.
The maintenance should ensure that your product is permanently safe and operational. All components subject to normal wear and tear are checked and, if necessary, replaced.
Maintenance work may be performed by the operator only if this is described on the part of Sirona Dental Systems GmbH, otherwise only authorized service engineers of Sirona Dental Systems GmbH or its authorized dealers may be entrusted with the work.
In case you have not concluded a maintenance contract, please contact the customer service department of your dental dealership.
The performed maintenance must be documented in this document, which must be kept with the unit.

We wish you much success and pleasure with your quality product
from **SIRONA Dental Systems.**

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1 General information

1.1 Wiring References

Inspection and maintenance work must be performed at regular intervals to protect the safety and health of patients, users and third parties.

As the operator, you should ensure the safety and reliability of your **system by performing inspection on it at least once annually** or having this work performed by your dental dealership.
The information in chapter **2 'Annual inspection performed by the operator or other authorized personnel'** will be helpful to you. If one or more inspections fail to achieve satisfactory results, please contact your dental dealership.

In addition, your dental dealership also offers you annual inspections performed by specially trained technicians, chapter **3 'Maintenance by the service engineer' is provided for this purpose**.

Sirona Dental Systems GmbH or its representatives cannot be held liable in any way for any faults, material damage, personal injury or other abnormal conditions resulting from improper handling or failure to perform the required maintenance.

The inspection and maintenance work performed by the operator or service engineer must be reported in this document and kept with the unit!

1.2 Please complete the general information

Customer	
Last name:	
First name:	
Street:	
Post code / city:	
Phone:	

Unit data*			
Unit serial No.:			
Tube unit serial No.:			
Phantom serial No.:			

*** Info to the engineer: Please update the serial number when replacing a component.**

2 Annual inspection performed by the operator or other authorized personnel.

2.1 Technical documentation

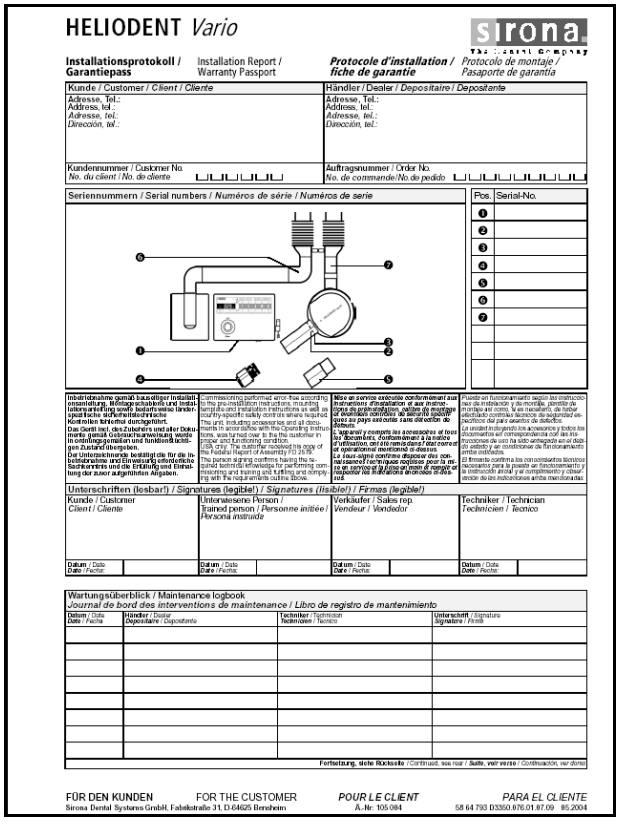
Technical documentation	**Answer questions with yes (✓) or no (–)**									
Date (Enter month/year)										
Operating instructions present?										
Installation instructions present?										
Installation Report / Warranty passport completely filled out?										
Installation requirements present?										

2.2 Accessories

Accessories (cf operating instructions)	**Answer questions with yes (✓) or no (–)**									
Date (Enter month/year)										
Conventional test specimen present?										
Digital test specimen present?										
12" tube present?										
X-ray field limitation present?										
Sensor holder set present?										

2.3 Labels

Compare labeling on the unit with Installation Report / Warranty Passport	**Answer questions with yes (✓) or no (–)**									
Date (Enter month/year)										
Are all labels applied completely according to installation certificate / warranty passport										
Are all labels legible?										



HELIODENT *Vario*

sirona

Installationsprotokoll / Garantiepass Installation Report / Warranty Passport ***Protocole d'installation / fiche de garantie*** *Protocolo de montaje / Pasaporte de garantía*

Kunde / Customer / *Client* / *Cliente*

Adresse, Tel.: / Address, tel.: / *Adresse, tel.:* / *Dirección, tel.:*

Händler / Dealer / *Depositaire* / *Depositante*

Adresse, Tel.: / Address, tel.: / *Adresse, tel.:* / *Dirección, tel.:*

Kundennummer / Customer No. / *No. du client* / *No. de cliente*

Auftragsnummer / Order No. / *No. de commande* / *No. de pedido*

Seriennummern / Serial numbers / *Numéros de série* / *Números de serie*

Pos.	Serial-No.
1	
2	
3	
4	
5	
6	
7	

Inbetriebnahme gemäß Aufstellungs- und Installationsanleitung, Montageschablone und Installationsprotokoll durchgeführt. Kontrollen funktional durchgeführt. Das Gerät bei, das Zubehör und alle Dokumente gemäß Gebrauchsanweisung wurde in ordnungsgemäßem und funktionsfähigem Zustand übergeben. Der Unterzeichnende bestätigt die für die Inbetriebnahme und Einweisung erforderliche Sachkenntnis und die Erfüllung und Einhaltung der zuvor aufgeführten Angaben.

Commissioning performed error-free according to the pre-installation instructions, mounting template and installation report. Checks as per security-specific safety control sheets required. The unit, including accessories and all documents in accordance with the Operating Instructions, was handed over to the customer in proper and functioning condition. USA only: The customer received his copy of the Federal Report of Assembly FD 2578. The person signing confirms having the required technical knowledge for performing commissioning and training and fulfilling and complying with the requirements outline above.

Mise en service exécutée conformément aux instructions d'installation et aux instructions de montage, gabarit de montage et protocole d'installation. Les contrôles spécifiques aux pays exécutés sans détection de défauts. Le présent instrument, les accessoires et tous les documents ont été remis au client en bon état de fonctionnement. Le soussigné confirme disposer des connaissances techniques requises pour la mise en service et la formation ainsi que pour remplir et respecter les indications énoncées ci-dessus.

Puesta en funcionamiento según las instrucciones de instalación y de montaje, plantilla de montaje y protocolo de instalación. Controles efectuados conforme a las hojas de seguridad específicos del país usando los detectores de defectos. La unidad incluyendo los accesorios y todos los documentos así correspondientes con las instrucciones de uso ha sido entregada en el estado de pedido y en condiciones de funcionamiento arriba indicadas. El firmante confirma los conocimientos técnicos necesarios para la puesta en funcionamiento y formación así como el cumplimiento y observación de las indicaciones arriba mencionadas.

Unterschriften (lesbar!) / Signatures (legible!) / *Signatures (lisible!)* / *Firmas (legible!)*

Kunde / Customer / *Client* / *Cliente*	Unterwiesene Person / Trained person / *Personne initiée* / *Persona instruida*	Verkäufer / Sales rep. / *Vendeur* / *Vendedor*	Techniker / Technician / *Technicien* / *Técnico*
Datum / Date / Date / Fecha:	Datum / Date / Date / Fecha:	Datum / Date / Date / Fecha:	Datum / Date / Date / Fecha:

Wartungsüberblick / Maintenance logbook / *Journal de bord des interventions de maintenance* / *Libro de registro de mantenimiento*

Datum / Data / Date / Fecha	Händler / Dealer / Depositaire / Depositante	Techniker / Technician / Technicien / Técnico	Unterschrift / Signature / Signatura / Firma

Fortsetzung, siehe Rückseite / Continued, see rear / *Suite, voir verso* / Continuación, ver dorso

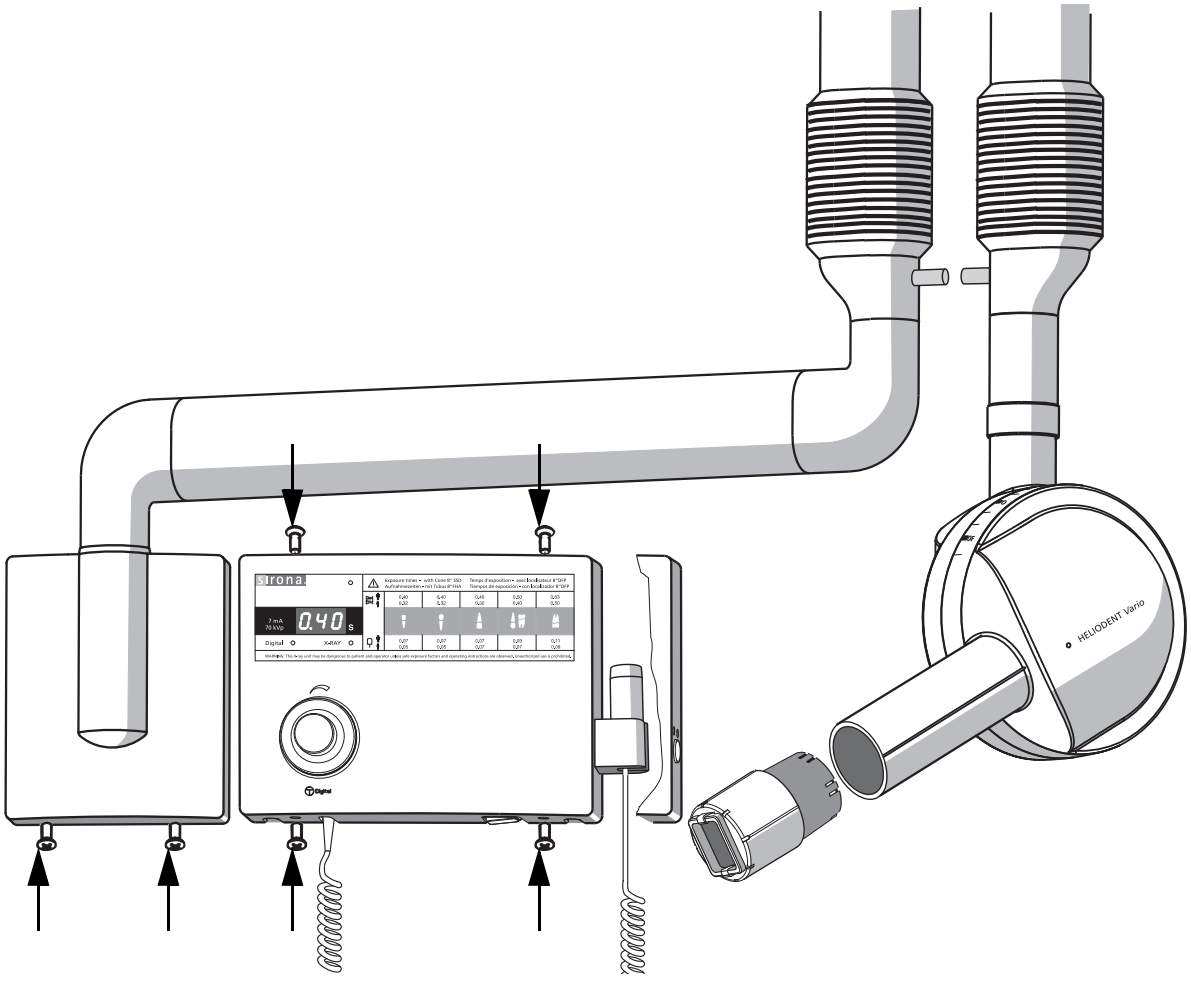
FÜR DEN KUNDEN FOR THE CUSTOMER *POUR LE CLIENT* *PARA EL CLIENTE*

Sirona Dental Systems GmbH, Fabrikstraße 31, D-64625 Bensheim A.-Nr. 105 084 58 64 793 D3350.876.01.87.09 05.2004

Enter changes here:			
X-ray tube unit		**Date**	**Signature**
Serial no.			
Serial no.			
Serial no.			
Tube			
Serial no.			
Serial no.			
Serial no.			
Collimation			
Serial no.			
Serial no.			
Serial no.			
12" tube			
Serial no.			
Serial no.			
Serial no.			
Timer box			
Serial no.			
Serial no.			
Serial no.			

2.4 Surfaces

Housing covers	**Answer questions with yes (✓) or no (–)**									
Date (Enter month/year)										
Are all housing covers present?										
Are the housing covers undamaged?										
Do the housing covers fit perfectly?										
Are the housing covers clean?										
Are all screws present?										



2.5 Functions

Condition of X-ray tube unit / arm / remote control / remote timer	**Answer questions with yes (✓) or no (–)**									
Date (Enter month/year)										
Oil leak on X-ray tube unit (visible on outside of tube housing)?										
Coiled cable with strain relief and antikink protection OK?										
Can the support arm be moved smoothly, without jolting, easily and without running noises?										
Is the scissor arm in an upright position, are the stopper buffers exactly opposite each other?										
Does the scissor arm stay in the set position?										

Unit functions	**Answer questions with yes (✓) or no (–)**									
Date (Enter month/year)										
Unit properly fastened to wall?										
Main power switch operative?										
Is the exposure interrupted when you let go of the release switch (dead man's button)?										
Optical (X-ray lamp) and acoustic signals during radiation emission?										
All buttons and indicators functioning?										
Were all unit functions performed according to the operating instructions?										
Does the image quality remain unchanged?										

2.6 Document annual inspection

The undersigned confirms having checked the unit according to the information listed above.

NOTE: If a question is answered with NO or if an error message occurs repeatedly, please contact your service engineer.

Date of the inspection:		**Name:**		**Signature:**	
Date of the inspection:		**Name:**		**Signature:**	
Date of the inspection:		**Name:**		**Signature:**	
Date of the inspection:		**Name:**		**Signature:**	
Date of the inspection:		**Name:**		**Signature:**	
Date of the inspection:		**Name:**		**Signature:**	
Date of the inspection:		**Name:**		**Signature:**	
Date of the inspection:		**Name:**		**Signature:**	

3 Maintenance by the service engineer

General information for the service engineer

The **Service Manual for** HELIODENT *Vario* (Order No. 58 92 885) is an essential requirement for performing the maintenance work, since all measures necessary for maintenance are described in it.
The operating instructions delivered with the unit are also required.

Measurements

Before connecting the measuring instruments always switch the unit off.

Select the correct type of current/voltage and set the measuring range according to the expected measured value.

Perform continuity tests only with the unit switched off.

If you have to take several exposures with radiation to check a measurement, you must comply with the prescribed cool-down phases.

Observe the radiation protection guidelines before you release radiation.

If you open the unit:
Please observe the precautionary measures when handling PC boards (ESD).
Discharge yourself before touching the components by grasping a ground point.

3.1 Maintenance interval

NOTE

In addition to the inspection to be performed annually by the operator or by authorized persons, maintenance must be performed after 4, 7, 10 and then every two years.

Always perform a functional test before starting the maintenance work and notify the customer or practice personnel about any defects found.

Should it be necessary to replace defective components apart from the parts subject to wear, this must be agreed previously with the customer or practice personnel.

ATTENTION Discontinuation of spare parts supply:
The supply of spare parts will be discontinued for every unit after a certain period of time. The operator undertakes the responsibility in case of safety-related failures for units which continue to be operated after this time and can no longer be maintained due to the lack of spare parts.

3.2 Checking the entry

In Chapter "Annual inspection performed by the operator or other authorized personnel." on page 6

Annual inspection by the operator	**Answer questions with yes (✓) or no (–)**							
Maintenance interval after X years	**4**	**7**	**10**	**12**	**14**			
Date (Enter month/year)								
Annual inspection performed by the operator?								
Entries complete?								
Are all questions answered with **yes**?								
Has all work which in the checks led to a negative result been performed?								

3.3 Timer box maintenance

(cf Service Manual, section 4.3)

Unit safety	**Answer questions with yes (✓) or no (–)**							
Maintenance interval after X years	**4**	**7**	**10**	**12**	**14**			
Date (Enter month/year)								
Is the mounting on the wall in a safe condition?								
Are all cover parts installed and free of damage?								
Are all protective ground wire connections made firmly?								
Is the power cable connected free of damage, firmly and according to regulations?								
Is DX1 in order?								
Are the exposure times in order?								

3.4 Arm, tube unit maintenance

(cf Service Manual, section 4.4-4.6)

Unit safety	**Answer questions with yes (✓) or no (–)**							
Maintenance interval after X years	**4**	**7**	**10**	**12**	**14**			
Date (Enter month/year)								
Is the support arm in order?								
Can the support arm be moved smoothly, without jolting, easily and without running noises?								
Is the scissor arm in an upright position, are the stopper buffers exactly opposite each other?								
Does the scissor arm stay in the set position?								
Are the moving support arm parts and cast parts free from abrasion and mechanical damage?								
Do all retaining rings fit properly?								
Is the tube assembly securely screwed onto the support arm (min. 3 Nm)?								
Have no toothed lock washers been placed underneath the screw heads?								
Is the tube unit joint in order?								
Is the tube unit without oil loss?								
Are all protective ground wire connections made firmly? (cf section 4.6)								

3.5 Wall adapter maintenance

(cf Service Manual, section 4.7)

Unit safety	**Answer questions with yes (✓) or no (–)**							
Maintenance interval after X years	**4**	**7**	**10**	**12**	**14**			
Date (Enter month/year)								
Is the mounting on the wall in a safe condition?								
Are all cover parts available and free of damage?								
Are all protective ground wire connections made firmly?								
Are the cables connected at terminal K2 connected free of damage, firmly and according to regulations.								

3.6 Safety check

(cf Service Manual, section 4.8)

Unit safety	**Answer questions with yes (✓) or no (–)**							
Maintenance interval after X years	**4**	**7**	**10**	**12**	**14**			
Date (Enter month/year)								
Are all protective ground wire connections made firmly?								
Is the protective ground wire test in order?								
Is the unit leakage current test in order?								
Enter measurements								

3.7 Final work

Unit safety	**Answer questions with yes (✓) or no (–)**							
Maintenance interval after X years	**4**	**7**	**10**	**12**	**14**			
Date (Enter month/year)								
Was the complete functional test performed (see operating instructions)								
Was the unit cleaned?								

3.8 Document maintenance

The undersigned confirms having checked the unit according to the information provided above.

If a question is answered with No, the fault must be eliminated.

Date of maintenance:		**Engineer's name:**		**Signature:**	
Date of maintenance:		**Engineer's name:**		**Signature:**	
Date of maintenance:		**Engineer's name:**		**Signature:**	
Date of maintenance:		**Engineer's name:**		**Signature:**	
Date of maintenance:		**Engineer's name:**		**Signature:**	
Date of maintenance:		**Engineer's name:**		**Signature:**	
Date of maintenance:		**Engineer's name:**		**Signature:**	
Date of maintenance:		**Engineer's name:**		**Signature:**	

Space for remarks

We reserve the right to make any alterations which may be required due to technical improvements.

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